

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1, 2, 4-7, 9, 10 and 26-31 are canceled by this amendment. Claims 11, 13-15 and 32-34 remain pending. This amendment places the claims in better condition for allowance or appeal and, therefore, is appropriate for entry under 37 C.F.R. § 1.116.

Claim 11 is the only independent claim which remains pending in the present application. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent no. 6,531,022 of Tsukahara ("Tsukahara") and U.S. Patent no. 3,971,610 of Buchoff et al. ("Buchoff") and further in view of U.S. Patent no. 5,340,947 of Credle et al. ("Credle"). Applicant respectfully traverses the rejection.

Claim 11 is as follows:

11. (Previously presented) An apparatus comprising:
- a circuit board including
    - a substrate having a first surface and a second surface parallel to the first surface,
    - a set of electrical traces parallel to the first surface and the second surface,
    - a plurality of tapered through holes in the substrate from the first surface to the second surface, and
    - an electrically conductive **elastomer** filling each of the through holes, at least one of the electrical traces being in electrical contact with the electrically conductive **elastomer** in at least one of the through holes; and
  - an electronic component coupled to the circuit board, the electronic component having a plurality of electrical contacts, each in physical and electrical contact with the **elastomer** in a separate one of the through holes. (Emphasis added.)

In the present case, the Examiner acknowledges that Tsukahara does not teach the use of a conductive elastomer. However, the Examiner cites Buchoff for such teaching and contends it would be obvious to combine the teachings of Buchoff (and Credle) with those of Tsukahara. Applicant respectfully disagrees.

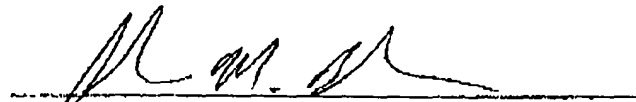
When combining the teachings of prior art references to establish obviousness, there must be something in the prior art to suggest the desirability of making the alleged combination. In re Rouffel, 149 F.3d 1350, 1356 (Fed. Cir. 1998). Buchoff discloses the use of electrically conductive elastomer to form contacts on a circuit board. However, Buchoff is directed to avoiding certain problems associated with mating metal contacts (Buchoff, col. 1, lines 14-45), particularly those which are subject to repeated connection and disconnection (Buchoff col. 1, line 25). These problems include broken contacts, misalignment of contacts, wear, etc. (Buchoff, col. 1, lines 25-26). In contrast, the types of contacts disclosed in Tsukahara (e.g., metal bumps mating with conductive paste) are not subject to these problems. The use of electrically conductive elastomer as disclosed in Buchoff (or similar art) would not improve the techniques disclosed in Tsukahara in any way. In fact, the Examiner has acknowledged that the conductive paste disclosed in Tsukahara already has the elasticity to be displaced when the bump is forced into the holes (Office Action, p. 4). Furthermore, it is not even apparent that the use of elastomer would be compatible with the mounting processes disclosed in Tsukahara. In view of these considerations, one skilled in the art would have no motivation to apply Buchoff's (or similar art's) teaching of conductive elastomer to the teachings of Tsukahara, nor is there any suggestion in the prior art to do so. Therefore, the subject matter of claim 11 is not obvious based on the cited combination of art.

Therefore, claim 11 and all claims which depend on it are believed to be in condition for allowance, and such action is respectfully requested.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Jordan M. Becker  
Reg. No. 39,602

12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1030  
(408) 720-8300

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